



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,764	07/30/2001	Joseph M. White	10014646-1	2752

7590 12/11/2003

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

PHAN, THIEM D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,764

Applicant(s)

WHITE, JOSEPH M.

Examiner

Tim Phan

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-8, 14 and 15 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 9, 12 and 13 is/are rejected.
- 7) Claim(s) 10 and 11 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicants' election without traverse of Group II, Claims 9-13, in Paper No. 5 is acknowledged.

The Restriction mailed on or about 3rd October 2003 has been carefully reviewed and is held to be proper. Moreover Applicants did not distinctly and specifically point out any error in the Restriction Requirement. Accordingly, Claims 1-8, 14 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups, there being no allowable generic or linking claim.

The Restriction filed on or about 3rd October 2003 is hereby made Final.

Applicants are required to cancel these nonelected claims (1-8, 14 & 15) or take other appropriate action.

An Office Action on the merits of Claims 9-13 now follows.

Title

2. The following title is suggested: "A Method Of Attaching An Integrated Circuit To A Chip Mounting Receptacle In A PCB With A Bolster Plate".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin (US 6,282,093 B1) hereinafter '093.

As applied to claim 9, the '093 teaches a mechanism that provides a desired, uniform pressure to the heatsink, component and circuit board by a backing plate, comprising:

- assembling a bolster plate or backing plate (Cf. Fig. 13A, element 50 or Fig. 17A, element 710) that includes:
 - a support rail (Cf. Fig. 17E or Fig. 13a, element 710 in Fig. 17E, no number in Fig. 13a) contacting the circuit board (Cf. Fig. 17A or 13A, element 70);

- the rail demarcates a central well surrounded by four posts (Cf. Fig. 17E, element 712 or Fig. 13A, element 60);
- the central well having a support surface (Cf. Fig. 17E or 13A) to support the circuit board underneath the chip component during attachment pressure;
- an insulator covering the support surface (Cf. Fig. 17A, element 720 or Fig. 13A, element 80);
- a shim or support (Cf. Fig. 17E, element 750 or Fig. 13A, element 630) between the insulator and support surface;
- attaching the bolster or backing plate (Cf. Fig. 17A, element 710 or Fig. 13A, element 50) to the circuit board and pressing the chip (Cf. Fig. 17A or 13A, element 90) into to mounting receptacle by the captive ring (Cf. Fig. 17A, element 740 or Fig. 13A, element 620).

If the '093 does not expressly teach a central well, it would have been obvious to one of ordinary skill in the art to provide or name the center of the backing or bolster plate, which is surrounded by four posts (Cf. Fig. 13a, element 60 or Fig. 17E, element 712) as a central well.

As applied to claims 12 and 13, the '093 teaches the claimed invention except for having a bow at the center of the bolster plate of small scale magnitude. It would have been obvious to one of ordinary skill in the art at the invention was made to have a small scale bow which is created at the center of the backing or bolster plate (Cf. Fig. 13A, element 50) when the captive ring is pressing against the retaining ring, the spreader plate, the four posts that generate

a counter-pressure against the chip, the circuit board, the insulator (CF. Fig. 17A, element 720), the support or shim then the support surface of the backing or bolster plate. Moreover it is alternatively held to be an inherent feature; to wit if one applies pressure to a sheet of metal it will in more all probability bow out.

Allowable Subject Matter

5. Claims 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 703-605-0707. The examiner can normally be reached on M - F, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3729

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

TP

CAJ

CARL J. ARBES
PRIMARY EXAMINER

Tim Phan
Examiner
Art Unit 3729

tp
December 5, 2003